This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) An apparatus for cryogenic distillation of air, said apparatus being a fully assembled unit, comprising:

a first self-contained distillation column module within which is provided a high pressure cryogenic distillation column;

a second self-contained distillation column module within which is provided a low pressure cryogenic distillation column, said second distillation column module being immediately adjacent to, mounted on top of, and attached directly to said first distillation column module;

a self-contained heat exchange module within which is provided a heat exchange means for cooling column feed air to a cryogenic distillation temperature, the self-contained heat exchange module being immediately adjacent and attached directly to at least one of the first self-contained distillation column module and the second self-contained distillation column module; and

at least one self-contained further processing unit immediately adjacent and attached directly to at least one of the first self-contained distillation column module, the second self-contained distillation column module, and the self-contained heat exchange module,

wherein the high pressure cryogenic distillation column, the low pressure cryogenic distillation column, said heat exchange means and each further processing unit are operationally interconnected, and

wherein said fully assembled unit is adapted to be transported as a single pre-assembled fully assembled unit from a first location to a second location at a substantial distance from the first location, and

wherein the transported single pre-assembled fully assembled unit is adapted to be

erected as the fully assembled unit at a site for a cryogenic air separation plant designed to produce at least 2000 metric tons/day of a gas product.

2-3. (Canceled).

4. (Previously Presented) An apparatus as claimed in Claim 1 wherein a diameter of at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column is over about 3.5m.

5. (Previously Presented) An apparatus as claimed in Claim 1 wherein a diameter of at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column is about 5m or about 6m.

6. (Canceled).

7. (Previously Presented) An apparatus as claimed in Claim1 further comprising a third self-contained distillation column module within which is provided an auxiliary distillation column or an argon side-arm column operationally interconnected with at least one of the high pressure cryogenic distillation column, and the low pressure cryogenic distillation column, the third self-contained distillation column module being adjacent and attached to at least one of the first self-contained distillation column module and the second self-contained distillation column module by a first cross-over structure between and adjoining the third self-contained distillation column module and at least one of the first and second distillation column modules.

8-10. (Canceled).

11. (Previously Presented) An apparatus as claimed in Claim 1 wherein the further processing unit is an air purification unit.

12. (Previously Presented) An apparatus as claimed in Claim 11 wherein the air purification unit comprises at least two air purification vessels, each air purification vessel comprising at least one bed of carbon dioxide and/or water adsorbent material, said air purification vessels being arranged in parallel and configured for use in a temperature or a pressure swing adsorption process.

13. (Previously Presented) An apparatus as claimed in Claim 1 wherein the at least one further processing unit is selected from the group consisting of a compressor for compressing feed air or other process gases, an expander for expanding liquid or gas streams, a chiller tower for cooling process water streams, a product compressor for compressing distillation products, a recycle compressor for compressing recycled gas stream(s), a pump for pumping distillation products, a "deoxo" unit for removing trace oxygen from a product gas stream, a dump vaporiser for vaporising liquid inventory from the apparatus, a silencer for reducing the noise given off by any process stream, a warm heat exchanger for warming process gas streams or a DCAC for cooling and drying air discharged from a compressor.

14. (Previously Presented) An apparatus as claimed in Claim 1 wherein the at least one further processing unit is a chiller tower.

15-18. (Canceled)

19. (Currently Amended) A method for construction of the apparatus as defined by Claim 1, said method comprising:

providing the self-contained heat exchange module within[,] which is provided the heat exchange means for cooling column feed air to a cryogenic distillation temperature, and the at least one self-contained further processing unit each in position immediately adjacent the first self-contained distillation column module within which is provided the high pressure cryogenic distillation column;

providing the second self-contained distillation column module[,] within which is provided the low pressure cryogenic distillation column[,] in position immediately adjacent to and mounted on top of the first self-contained distillation column module;

interconnecting operationally the high pressure cryogenic distillation column, the low pressure cryogenic distillation column, the heat exchange means and the further processing unit; and

attaching the second self-contained distillation column module, the self-contained heat exchange module and the further self-contained processing unit each in position immediately adjacent the first self-contained distillation column module to form the fully assembled unit adapted to be transported as the single pre-assembled fully assembled unit adapted to be erected as the fully assembled unit at the site for the cryogenic air separation plant.

20-23. (Canceled)

24. (Previously Presented) A method as claimed in Claim 19, comprising the further steps of:

providing a third self-contained distillation column module containing another cryogenic distillation column operationally interconnected with at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column; and

positioning the third self-contained distillation column module adjacent at least one of the first and second self-contained distillation column modules with a first cross-over structure positioned between and adjoining the third self-contained distillation column module and at least one of the first and second self-contained distillation column modules,

wherein the another cryogenic distillation column is an auxiliary distillation column or an argon side-arm column.

25. (Previously Presented) A method for construction of a cryogenic air separation plant comprising constructing the apparatus defined in Claim 1 to produce the fully assembled unit, transporting the single pre-assembled fully assembled unit to the site for the cryogenic air separation plant, and erecting the single pre-assembled fully assembled unit on site.

26. (Previously Presented) A method as claimed in Claim 25 wherein construction takes place at a dockside or a construction facility with access to the dockside prior to transportation to the site for the cryogenic air separation plant by sea.

27-29. (Canceled)

30. (Previously Presented) Use of the apparatus as defined in Claim 1, wherein the cryogenic air separation plant is constructed using said apparatus.

31. (Previously Presented) Use of the apparatus as claimed in Claim 30, wherein the cryogenic air separation plant constructed using the apparatus produces at least 3500 metric tons/day of oxygen.

32. (Currently Amended) An apparatus for cryogenic distillation of air, said apparatus being a fully assembled unit, comprising:

a first self-contained distillation column module containing a high pressure cryogenic distillation column and a first group of operationally interconnected components in fluid flow communication with a first set of conduits within the first self-contained distillation column module;

a second self-contained distillation column module containing a low pressure cryogenic distillation column and a second group of operationally interconnected components in fluid flow communication with a second set of conduits within the second self-contained distillation column module, the second self-contained distillation column

module being immediately adjacent to, mounted on top of, and attached directly to the first self-contained distillation column module, and the second set of conduits being in fluid flow communication with the first set of conduits;

a self-contained heat exchange module containing a heat exchange means in heat exchange communication with at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column, the self-contained heat exchange module being immediately adjacent and attached directly to at least one of the first self-contained distillation column module and the second self-contained distillation column module;

a self-contained further processing module containing a further processing unit and being immediately adjacent and attached directly to at least one of the first self-contained distillation column module, the second self-contained distillation column module, and the self-contained heat exchange module; and

a self-contained storage module containing a storage unit for storing a distillation product, the self-contained storage unit being immediately adjacent and attached directly to at least one of the first self-contained distillation column module and the second self-contained distillation column module,

wherein the high pressure cryogenic distillation column, the low pressure cryogenic distillation column, said heat exchange means, said further processing unit, and said storage unit are operationally interconnected, and

wherein said fully assembled unit is adapted to be transported as a single pre-assembled fully assembled unit from a first location to a second location at a substantial distance from the first location, and

wherein the transported single pre-assembled fully assembled unit is adapted to be erected as the fully assembled unit at a site for a cryogenic air separation plant designed to produce at least 2000 metric tons/day of a gas product.

33. (Previously Presented) An apparatus as in claim 32, comprising:

a third self-contained distillation column module containing another cryogenic distillation column operationally interconnected with at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column, the third self-contained distillation column module being adjacent and attached to at least one of the first self-contained distillation column module and the second self-contained distillation column module by a first cross-over structure between and adjoining the third self-contained distillation column module and at least one of the first and second distillation column modules, the another cryogenic distillation column being an auxiliary distillation column or an argon side-arm column.

34. (Previously Presented) An apparatus as in claim 32, comprising:

another self-contained storage module adjacent and attached to at least one of the first and second self-contained distillation column modules by another cross-over structure between and adjoining the another self-contained storage module and at least one of the first and second self-contained distillation column modules.

35. (Currently Amended) A method for installing a fully assembled unit for cryogenic distillation of air, comprising the steps of:

providing a first self-contained distillation column module containing a high pressure cryogenic distillation column and a first group of operationally interconnected components in fluid flow communication with a first set of conduits within the first self-contained distillation column module;

providing immediately adjacent <u>to and mounted on top of</u> the first self-contained distillation column module a second self-contained distillation column module containing a low pressure cryogenic distillation column and a second group of operationally

interconnected components in fluid flow communication with a second set of conduits within the second self-contained distillation column module;

attaching the first self-contained distillation column module directly to the immediately adjacent second self-contained distillation module;

placing in fluid flow communication the first set of conduits within the first self-contained distillation column module with the second set of conduits within the second self-contained distillation column module;

providing a self-contained heat exchange module containing a heat exchange means in heat exchange communication with at least one of the high pressure and low pressure cryogenic distillation columns, the heat exchange module being immediately adjacent to and operationally interconnected with at least one of the first self-contained distillation column module and the second self-contained distillation column module;

attaching the self-contained heat exchange module directly to at least one of the immediately adjacent first and second distillation column modules;

providing a self-contained further processing module containing a further processing unit and being immediately adjacent to and operationally interconnected with at least one of the first self-contained distillation column module, the second self-contained distillation column module, and the self-contained heat exchange module;

attaching the self-contained further processing module directly to at least one of the immediately adjacent first self-contained distillation column module, the second self-contained distillation column module, and the self-contained heat exchange module; and

interconnecting operationally the high pressure cryogenic distillation column, the low pressure cryogenic distillation column, the heat exchange module and the further processing unit,

wherein said fully assembled unit is adapted to be transported as a single pre-assembled fully assembled unit from a first location to a second location at a substantial distance from the first location, and

wherein the transported single pre-assembled fully assembled unit is adapted to be erected as the fully assembled unit at a site for a cryogenic air separation plant designed

to produce at least 2000 metric tons/day of a gas product.

36. (Previously Presented) The method of claim 35, comprising the further step of:

transporting the fully assembled unit as a single pre-assembled fully assembled unit from the first location to the second location at a substantial distance from the first location.

37. (Previously Presented) The method of claim 36, comprising the further step of:

erecting the single pre-assembled fully assembled unit at the site for the cryogenic air separation plant.

38. (Previously Presented) The method of claim 36, wherein the first location is at a dockside or a facility with access to the dockside and the single pre-assembled fully assembled unit is transported by sea from the dockside to the second location.

39. (Previously Presented) The method of claim 38, wherein the second location is at or near the site for the cryogenic air separation plant.

40. (Previously Presented) The method of claim 35, comprising the further steps of:

providing a third self-contained distillation column module containing another cryogenic distillation column operationally interconnected with at least one of the high pressure cryogenic distillation column and the low pressure cryogenic distillation column; and

positioning the third self-contained distillation column module adjacent at least one of the first and second self-contained distillation column modules with a first cross-over structure positioned between and adjoining the third self-contained distillation column module and at least one of the first and second self-contained distillation column modules,

wherein the another cryogenic distillation column is an auxiliary distillation

column or an argon side-arm column.

41. (Previously Presented) The method of claim 35, comprising the further steps of:

providing a self-contained storage module containing a storage unit for storing a distillation product; and

positioning the self-contained storage module adjacent at least one of the first and second self-contained distillation column modules with an other cross-over structure positioned between and adjoining the self-contained storage module and at least one of the first and second self-contained distillation column modules.